

CLAIMS

We claim:

1. An architectural graphic system comprising:
a decorative graphic article;
5 a thermal and mechanical dimensionally resistant polymer;
a flexible transparent polymer married to the thermal and mechanical dimensionally resistant polymer;
wherein the thermal and mechanical dimensionally resistant polymer acts to impart stability to the flexible transparent polymer through a decorating processes that
10 involves heat and/or mechanical stress;
wherein the thermal and mechanical dimensionally resistant polymer also acts to protect the surface of the flexible transparent polymer from scratches and abrasions during the manufacturing and handling operations up to and potentially including installation or application of the architectural graphic system onto a surface to be
15 decorated; and
a pressure sensitive adhesive applied to the decorative graphic article.
2. The system of claim 1 further comprising a release liner applied to the pressure sensitive adhesive.
3. The system of claim 1 wherein the pressure sensitive adhesive is
20 transparent, white or colored to produce various effects.
4. The system of claim 1 wherein the pressure sensitive adhesive is replaced with a thermal adhesive.
5. The system of claim 4 further comprising a release liner applied to the thermal adhesive.

6. The system of claim 4 wherein the thermal adhesive is transparent, white or colored to produce various effects.

7. The system of claim 1 wherein the surface of the thermal and mechanical dimensionally resistant polymer not in contact with the flexible transparent polymer is constructed to provide an easy release of the pressure sensitive adhesive.

8. The system of claim 7 wherein the surface of the thermal and mechanical dimensionally resistant polymer not in contact with the flexible transparent polymer is coated with a silicone or other release coating.

10 9. The system of claim 7 wherein the pressure sensitive adhesive is applied to the decorative graphic article and is not protected by a release liner.

10. The system of claim 7 wherein the construction of the system is self-wound as a web or sheeted with a plurality of layers such that a pressure sensitive adhesive surface is directly in contact with the surface of the thermal and mechanical dimensionally resistant polymer not in contact with the flexible transparent polymer.

11. The system of claim 10 wherein the layers can be unwound or peeled apart for application to a surface to be decorated.

12. The system of claim 1 wherein the architectural graphic system is used in a heat transfer application.

20 13. The system of claim 1 wherein the flexible transparent polymer is (SeriClear™ or SeriClearII™) is replaced by a flexible opaque polymer (SeriClearIII™) and the article is applied to a clear surface such that the decoration is visible through the article and the pressure sensitive adhesive.

14. The system of claim 1 wherein the decorative graphic is an in-mold decoration where the graphic is placed into a mold tool and resin injected into the mold is permanently bonded to the graphic such that the graphic becomes an integral part of the final product.

5 15. The system of claim 1 further comprising additional layers of texture, metal, holographics, pearlescent pigments or films, iridescent pigments or films that are incorporated into any layer of the construction to impart additional graphic impact.

10 16. The system of claim 1 wherein the flexible transparent polymer is replaced by a lenticular layer such that the subsequent decorative graphic when viewed after application is three-dimensional or displays multiple images when viewed at different angles.

15 17. The system of claim 1 wherein the thermal and mechanical dimensionally resistant polymer is replaced by a lenticular layer, which is not removed after application, such that the subsequent decorative graphic when viewed after application is three-dimensional or displays multiple images when viewed at different angles.

18. The system of claim 1 wherein the adhesive layer is selectively applied to the flexible transparent layer, wherein the adhesive layer selectively bonds to a non-pressure sensitive layer and further includes a pressure sensitive adhesive layer such that additional decorative graphics could be easily inserted in-between the flexible transparent layer and the non-pressure sensitive layer which includes the pressure sensitive adhesive layer for application to the article.

19. The system of claim 18 wherein the area in-between the flexible transparent layer and the non-pressure sensitive layer forms a pocket which requires all or parts of the flexible transparent layer not be decorated such that the inserted decorative graphic is visible when the decorative graphic pocket is applied to the article to be decorated.

20. The system of claim 1 wherein the thermal and mechanical dimensionally resistant polymer is not used because the architectural graphic system will be decorated with graphics in web form where the stability of the thermal and mechanical dimensionally resistant polymer is not required, or decorated by a digital printing process where the stability of the thermal and mechanical dimensionally resistant polymer is not required.

21. The system of claim 20 wherein the masking requirement of the thermal and mechanical dimensionally resistant polymer is also not required.

22. The system of claim 20 wherein the flexibility, dimensional pliability, weather resistance, abrasion resistance, floor wax compatibility, cleaning or other harsh chemical resistance of the flexible transparent polymer is required.

23. A multilayer decorated article comprising:
a thermal and mechanical dimensionally resistant polymer;
a flexible transparent polymer married to the thermal and mechanical dimensionally resistant polymer with the appropriate transparency and flexibility to perform in the described end uses;

wherein the flexibility required is such that manufacturing operations will still require the thermal and mechanical dimensionally resistant polymer to be married to the transparent flexible polymer; and

wherein the decorated article after the decorating and graphic applying operations is applied to a pressure sensitive adhesive.

24. The article of claim 23 wherein the pressure sensitive adhesive is protected by a release liner.

5 25. The article of claim 23 wherein the pressure sensitive adhesive is transparent, white or colored to produce various effects.

26. The article of claim 23 wherein the pressure sensitive adhesive is replaced with a thermal adhesive.

27. The article of claim 26 wherein the thermal adhesive is protected by a
10 release liner.

28. The article of claim 26 wherein the thermal adhesive is transparent, white or colored to produce various effects.

29. The article of claim 23 wherein the pressure sensitive adhesive is applied by coating, laminating or printing.

15 30. The article of claim 26 wherein the thermal adhesive is applied by coating, laminating or printing.

31. The article of claim 23 wherein the surface of the thermal and mechanical dimensionally resistant polymer not in contact with the flexible transparent polymer is constructed to provide an easy release of the pressure sensitive
20 adhesive.

32. The article of claim 31 wherein the surface of the thermal and mechanical dimensionally resistant polymer not in contact with the flexible transparent polymer is coated with a silicone or other release coating.

33. The article of claim 32 wherein the pressure sensitive adhesive is
5 applied to the decorative graphic article and is not protected by a release liner.

34. The article of claim 23 wherein the construction of the article is self-wound as a web or sheeted with a plurality of layers such that a pressure sensitive adhesive surface is directly in contact with the surface of the thermal and mechanical dimensionally resistant polymer not in contact with the flexible transparent polymer.

10 35. The article of claim 34 wherein the layers can be unwound or peeled apart for application to a surface to be decorated.

36. The article of claim 23 wherein the multilayer decorated article is used in a heat transfer application.

37. The article of claim 23 wherein the transparent flexible layer
15 (SeriClear™ or SeriClearII™) is replaced by a flexible opaque layer (SeriClearIII™) and the article is applied to a clear surface such that the decoration is visible through the article and the pressure sensitive adhesive.

38. The article of claim 23 wherein the decorative graphic is an in-mold decoration where the graphic is placed into a mold tool and the resin injected into the
20 mold is permanently bonded to the graphic such that the graphic becomes an integral part of the final product.

39. The article of claim 23 further comprising additional layers of texture, metal, holographics, pearlescent pigments or films, iridescent pigments or films that are incorporated into any layer of the construction to impart additional graphic impact.

5 40. The article of claim 23 wherein the flexible transparent polymer is replaced by a lenticular layer such that the subsequent decorative graphic when viewed after application is three-dimensional or displays multiple images when viewed at different angles.

41. The article of claim 23 wherein the thermal and mechanical
10 dimensionally resistant polymer is replaced by a lenticular layer, which is not removed after application, such that the subsequent decorative graphic when viewed after application is three-dimensional or displays multiple images when viewed at different angles.

42. The article of claim 23 wherein the adhesive layer is selectively
15 applied to the flexible transparent layer; wherein the adhesive layer selectively bonds to a non-pressure sensitive layer and further includes a pressure sensitive adhesive layer such that additional decorative graphics could be easily inserted in-between the flexible transparent layer and the non-pressure sensitive layer which includes the pressure sensitive adhesive layer for application to the article.

20 43. The article of claim 42 wherein the area in-between the flexible transparent layer and the non-pressure sensitive layer forms a pocket which requires all or parts of the flexible transparent layer not be decorated such that the inserted decorative graphic is visible when the decorative graphic pocket is applied to a surface to be decorated.

44. The article of claim 23 wherein the thermal and mechanical dimensionally resistant polymer is not used because the multilayer decorated article will be decorated with graphics in web form where the stability of the thermal and mechanical dimensionally resistant polymer is not required, or decorated by a digital printing process where the stability of the of the thermal and mechanical dimensionally resistant polymer is not required.

45. The article of claim 44 wherein the masking requirement of the thermal and mechanical dimensionally resistant polymer is also not required.

46. The article of claim 44 wherein the flexibility, dimensional pliability, weather resistance, abrasion resistance, floor wax compatibility, cleaning or other harsh chemical resistance of the flexible transparent polymer is required.